THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today(1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte Michael J. Hubbard,
Jeannemarie DeTorre,
Keith Watt and
Raymond J. Weinert

Appeal. No. 1999-0737
Application 08/655,176[1]

ON BRIEF

Before ABRAMS, FRANKFORT and GONZALES, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

[1] Application for patent filed May 30, 1996.

DECISION ON APPEAL

This is a decision on appeal from the examiner's refusal to allow claims 1-6, 8-14, 16-21, 23-25 and 27-29 as amended subsequent to the final rejection in a document filed March 30, 1998 (Paper No. 10). Claims 7, 15, 22 and 26, the only other claims remaining in the application, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 30 has been canceled.

Appellants' invention is directed to a roofing membrane heat seal indicator which provides a positive, visually perceptible indication that a seam has been raised to a sufficiently high temperature to achieve a proper seal. Independent claim 1 is representative of the subject matter on appeal and a copy of that claim, as reproduced from the Appendix to appellants' brief, is attached to this decision.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Wahl et al. (Wahl)	3,002,385	Oct. 3, 1961
Spirg	4,459,046	July 10, 1984
Takahara et al. (Takahara)	4,601,588	July 22, 1986
Stamper et al. (Stamper)	4,827,686	May 9, 1989

Appellants' admitted prior art, found on page 1, lines 26-33 of the instant specification is also relied upon by the examiner.

Claims 1-6, 8-11, 14, 16, 17, 21, 23-25 and 27 stand rejected under 35 U.S.C. § 103 as being unpatentable over Stamper in view of Spirg, Takahara and appellants' admitted prior art.

Claims 12, 13, 18-20, 28 and 29 stand rejected under 35 U.S.C. § 103 as being unpatentable over Stamper, Spirg, Takahara and appellants' admitted prior art as applied above, and, further in view of Wahl.[2]

Rather than reiterate the examiner's full statement of the above-noted rejections and the conflicting viewpoints advanced by the examiner and appellants regarding those rejections, we make reference to the examiner's answer (Paper No. 15, mailed July 27, 1998) for the examiner's reasoning in support of the rejections, and to appellants' brief (Paper No. 14, filed June 4, 1998) for the arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellants' specification and claims, to the applied prior art references and admissions, and to the respective positions articulated by appellants' and the examiner. As a consequence of our review, we have made the determinations which follow.

[2] As indicated in the advisory action mailed May 1, 1998 the §112, second paragraph, rejection of claims 1-29 has been overcome by the revised amendment filed March 30, 1998 (Paper No. 10).

Looking first to the examiner's prior art rejection of claims 1-6, 8-11, 14, 16, 17, 21, 23-25 and 27 under 35 U.S.C. § 103 as being obvious in view of the combined teachings of Stamper, Spirg, Takahara and appellants' admitted prior art, we must agree with appellants' position that the applied prior art is not properly combinable in the manner urged by the examiner. According to the examiner in his answer (page 7, lines 9-12), since the indicators of Spirg, Takahara, Wahl and others would function as desired without any "surprising" or "unexpected" results when combined with a roofing sheet like the one taught by Stamper, it therefore would have been obvious to one of ordinary skill in the art to combine these teachings. We believe this standard to be in error and improper.

In our opinion, the only possible reason that one of ordinary skill in the art would have considered the combination as posited by the examiner is based on hindsight derived from appellants' own disclosure and not from any teachings or suggestions found in the admitted prior art and applied references themselves. Like appellants (brief, pages 14 and 15), absent the disclosure of the present application, we do not consider that one of ordinary skill in the art would have been motivated to modify the roofing membrane of the admitted prior art and Stamper, with temperature indicators like the ones disclosed by Spirg and Takahara in the manner required to arrive at the membrane roofing assembly defined in appellants' claims on appeal. Stamper teaches a roofing membrane with a thin epoxy resin coating. The focus of the patent appears to be colorization of the roofing membrane to some color other than black. Stamper does not discuss or explain the installation procedures nor does it address any installation difficulties which would have motivated one of ordinary skill in the art to look towards combining this teaching with a heat seal indicator. Spirg teaches a self-adhesive type heat indicator which appears to be applicable to single site temperature monitoring. The reference does not stipulate any specific application and thus is silent as to any roofing application. It appears, for

mechanical reasons that Spirg would also prefer the temperature indicator to be an annulus shape to avoid separating of the printed materials from the foil (column 1, lines 53-61). Thus, even if one were to combine the teachings of Stamper and Spirg it does not appear the result would be a temperature indicating strip disposed on an upper surface of a roof membrane and which operates below the melting point of the roof membrane as required in the claims before us on appeal.

The main object of Takahara (column 4, lines 46-47) is the preservation and control of low-temperature preserved goods. Its unique design includes a waxy substrate that is micro-encapsulated so that it does not come into contact with a color developing agent even though it may melt during handling before it is applied to the frozen foods. These micro-capsules must first be broken under a definite load such as a hand roller before the indicator can perform a color change due to temperature. The indicator of Takahara is designed specifically to activate a color change in a relatively ambient or cold temperature range. This temperature is far below the temperature level that appellants' roof membrane heat indicator must operate. There appears to be no motivation for one of ordinary skill in the art to combine this type of temperature indicator with a process involving the sealing of a roof membrane.

It is also noted that each of the independent claims recites the limitation that the temperature indicator strip must change its appearance at a preselected temperature less than the melting temperature of the roofing membrane. As pointed out on page 10 of the specification, the indicator strip will not be heated to a temperature as high as the opposite surface of the roofing membrane due to the insulating characteristics of the roofing membrane material. Thus, the indicator strip must provide its color shift at a temperature below the melting temperature of

the membrane material. This teaching is also not found in any of the prior art applied by the examiner.

For the above reasons, the examiner's rejection of the claims 1-6, 8-11, 14, 16, 17, 21, 23-25 and 27 under 35 U.S.C. § 103 based on the combination of Stamper, Spirg, Takahara, and, appellants' admitted prior art will not be sustained.

We next consider the examiner's rejection of claims 12, 13, 18-20, 28 and 29 under 35 U.S.C. § 103 wherein Stamper, Spirg, Takahara and appellants' admitted prior art are combined with Wahl. We note that these claims each ultimately depend from independent claims 1, 8, 16 and 24 and thus include all the limitations thereof. Accordingly, it follows from our determination above that these dependent claims would not have been obvious to one of ordinary skill in the art based on the combined teachings of Stamper, Spirg, Takahara, and appellants' admitted prior art. The examiner's reliance on Wahl to teach a specific indicator with either salts or colored pigment/meltable covering layers (answer, page 7) does not alleviate the shortcomings of Stamper, Spirg, Takahara, and appellants' admitted prior art in failing to provide any teaching suggesting a reason or motivation to combine the references and admitted prior art in the manner urged by the examiner. Accordingly, we will not sustain the examiner's rejection of dependent claims 12, 13, 18-20, 28 and 29 under 35 U.S.C. § 103.

As should be apparent from the foregoing, the decision of the examiner rejecting claims 1-6, 8-14, 16-21, 23-25 and 27-29 of the present application is, accordingly, reversed.

REVERSED

NEAL E. ABRAMS Administrative Patent Judge	)	
CHARLES E. FRANKFORT Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JOHN F. GONZALES Administrative Patent Judge	)	

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APPENDIX

1. A roofing membrane and seal indicator for use in a membrane roofing installation comprising, in combination, a first roofing membrane defining a melting temperature and having a first edge and first opposed surfaces, and a temperature indicating strip disposed on one surface of said first membrane, said temperature indicating strip having a first appearance below a preselected temperature and a second, distinct appearance after having been exposed to a temperature above said preselected temperature, said preselected temperature being less than said melting temperature.